METHODS AND DEVICES FOR THE CONVERSION OF HEAT INTO POWER WITH HEAT RECYCLING

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Inventor: LAUFENBERG JOSEF (DE); HOFFS MICHAEL (DE)
Applicant: LAUFENBERG JOSEF (DE); HOFFS MICHAEL (DE)
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Abstract of **WO2004029420**

Heat conversion into power: external heat supply from outside, internal heat injection, cooling heat exploitation from heat power circuits, recycling by means of heat pump working cycles, using water density as heat carrier in heat store, heat exchanger. Working medium controlled by means of pulse generator, central programme and circuits. In the heat power circuit with circulating C02, condensate at 253K/-20 DEG C/20 bar is pumped into the heat-accepting partial circuit at 75 bar, heat injected at 304K/31 DEG C to give pressurised gas, heat subsequently transferred at ca. 300 DEG C, for overheating expansion, from the heat pump circuit, the C02 pressurised gas applied in stages with heat injection to the engine drive, the gas pressure reduced to 20 bar ca. 0 DEG C, controlled by overheating conditions ". C02 heat of condensation of 280 kJ/kg is transmitted to heat pump working medium evaporation. NH3 condensate gives vapour at ca. 1220 kJ/kg 1,2 bar 243 K/-30'C, subsequently the vapour compressed to ca. 20 bar with temperature rise (NH3 property) at ca. 573 K/ca. 300 DEG C by means of pistons (without lubricant) pressurised by water pressure. Heat output from the heat power circuit with circulating NH3 occurs partly by direct transmission of NH3 into the heat pump working cycle. Working cycle: heat power circuit with circulating NH3, approximately corresponds to the heat generation for heat pumps and generator drive with circulating C02.